11.3.46

Oregon
John A. Kitzhaber, M.D., Governor

Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204-1390
(503) 229-5696
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November 19, 1999

Mr. Lee Zimmerli
McCall Oil and Chemical Corporation
808 S.W. 15th Avenue
Portland, Oregon 97205

USEPA SF
1187783

CERTIFIED MAIL

Re: McCall Oil and Chemical Corporation/Great Western Chemical Co. Site: Request for Performance of Remedial Investigation

Dear Mr. Zimmerli:

This letter informs you of the results of our review of information regarding hazardous substance contamination at the McCall Oil and Chemical Corporation/Great Western Chemical Co. (McCall) facility located at 5480, 5540 and 5700 NW Front Avenue in Portland, Oregon. The Oregon Department of Environmental Quality has determined that the McCall site is a high priority for a remedial investigation and feasibility study and requests that McCall Siltronic Corporation perform a remedial investigation and feasibility study in accordance with the Environmental Cleanup Law, Oregon Revised Statutes (ORS) 465.200 *et seq.*

The McCall facility is located within or near a portion of the Willamette River known as the Portland Harbor. A 1997 investigation revealed significant contamination of sediments within the harbor. DEQ has undertaken review of available information regarding properties throughout the harbor to identify potential sources of the sediment contamination. The results of DEQ's review, based on available site data, historical operations, (including the use of hazardous substances), and the presence of contaminants in adjacent sediments, for the McCall facility are summarized in the enclosed Strategy Recommendation.

Available information indicates that a release of a hazardous substance has occurred or might have occurred at the McCall facility and come to be located in Willamette River sediments. DEQ has determined that remedial action might be necessary to protect public health, safety, welfare and the environment and that a remedial investigation and feasibility study must be performed. The remedial investigation will fully identify, among other things, the source, nature, and extent of any releases of hazardous substances to sediments at or near the McCall facility, and determine whether further remedial measures will be necessary at the McCall facility. The feasibility study will be designed to select an appropriate remedy for the site.

DEQ proposes that your performance of the remedial investigation and feasibility study be governed by an agreement in the form of the enclosed Voluntary Agreement for a Remedial Investigation and Feasibility Study and Scope of Work. The facility's remedial investigation and feasibility study will be coordinated with harbor-wide sediments investigations currently being

Enclosures

c: Kurt Burkholder, DOJ
Dave St. Louis, Manager, NWR Site Assessment Program
Mike Rosen, NWR Voluntary Cleanup Program
Gil Wistar, Coordinator, Site Assessment Program
ESCI File No.: 134

VOLUNTARY CLEANUP PROGRAM
INTENT TO PARTICIPATE

Identification of Site

Site Name: McCall Oil & Chemical Corp./Great Western Chemical Co. Site

Site Address: 5480, 5540, 5700, NW Front Avenue, Portland

Owner/Operator: McCall Oil & Chemical Corp.

Mailing Address: Attn: Mr. Lee Zimmerli, McCall Oil & Chemical Corp.
808 SW 15th Avenue, Portland, OR 97205

Intent to Participate

The undersigned intends to negotiate in good faith a written agreement with DEQ to provide for voluntary performance of a remedial investigation under DEQ oversight. The agreement will describe the project activities of each party and will require the undersigned to reimburse DEQ for oversight costs.

With this Intent to Participate, the undersigned does not admit or assume liability regarding the site.

Please execute this Intent to Participate in the space below and return it to:

Eric Blischke
Department of Environmental Quality
Waste Management and Cleanup Division
811 S.W. Sixth Avenue
Portland, OR 97204

By: _____ Name: _____
(signature of authorized representative) (print or type)

Title: _____ Company: _____

Date: _____ Telephone: _____

DEQ SITE ASSESSMENT PROGRAM - STRATEGY RECOMMENDATION

Site Name: McCall Oil & Chemical Corp. and Great Western Chemical Co.

Site CERCLIS Number: (none)

DEQ ECSI Number: 134

Site Address: 5480/5540/5700 NW Front Avenue Portland, Oregon 97210

Recommendation By: Tom Gainer, Voluntary Cleanup and Site Assessment Section, DEQ Northwest Region

Approved By: Michael E. Rosen, Portland Harbor Manager, DEQ Northwest Region

FOR MER

Date: November 15, 1999

NOTE: This site (Figure 1) is within a 6-mile stretch of the Lower Willamette River in which the U.S. Environmental Protection Agency (EPA) conducted a sediment study in 1997. This area, referred to as the *Portland Harbor*, is between the upstream ends of Sauvie Island (River Mile 3.5) and Swan Island (RM 9.5). The purpose of this Strategy Recommendation is to determine whether a specific hazardous substance release or a specific past operation at the site can be linked to contamination documented by EPA in sediments adjacent to the site. Because of this focus, the Strategy Recommendation may omit some historical site information, regulatory issues, or further-action conclusions that might otherwise be included in a DEQ Strategy Recommendation.

Background, Portland Harbor Sediment Evaluation

In September and October 1997, EPA's contractor, Roy F. Weston, Inc., collected 187 near-shore sediment samples within the Portland Harbor area defined above. Most samples (150) were collected as shallow grab samples within the upper 6 to 17 centimeters (cm) of sediments. 37 deeper composite core samples, from depths of between 55 and 139 cm, were also collected. All samples were analyzed for total metals, semi-volatile organic compounds (SVOCs), total organic carbon (TOC), and sediment grain size. Selected samples were also variously analyzed for organotins (TBTs), pesticides,

lead more than 50% in SD114, and the remaining shallow contaminants only marginally exceeded baseline values.

Subsurface sediment concentrations adjacent to the subject site of the following contaminants exceeded Portland Harbor baseline levels: aluminum, barium, cobalt, mercury, zinc, dibenzofuran, and low- and high-molecular weight polynuclear aromatic hydrocarbons (LPAHs and HPAHs, respectively). Dibenzofuran and LPAH concentrations in SD120A (at McCall Oil's bulk fuel terminal dock) exceeded the baseline level by more than two times.

Analyses from shallow sediment sample SD131 (Table 1), collected about 1,000 feet upstream of the subject site, indicate that upstream sites do not appear to be impacting sediment adjacent to the subject site.

Operational History

The 36-acre subject site includes three operations: McCall Oil Marine Terminal (property owned by Port of Portland), McCall Oil Asphalt Plant (property owned by McCall Oil and Chemical Corporation), and Great Western Chemical Company (GWCC, property owned by Great Western Chemical Properties, Inc. and Port of Portland). Figure 3 shows the locations of current operations on the subject site. The following information was summarized from an April 4, 1994 Preliminary Assessment (PA) of McCall Oil and Great Western Chemical. In September 1993, the DEQ requested that McCall conduct a PA on the subject site as part of DEQ's ongoing regional investigation of petroleum contamination in the Willbridge industrial area.

The McCall facility stores, blends, and distributes petroleum products including asphalt, bunker fuel, and diesel fuel. The McCall marine terminal has operated since 1975 and includes the marine dock, above ground storage tanks (ASTs), truck loading rack, equipment maintenance storage shed, and offices.

McCall has operated the asphalt plant since 1982, which includes ASTs, railcar and truck loading racks, boilers, and a product testing laboratory.

GWCC facilities on the subject site include two entities that started operations in the mid-1980's: the Technical Center, which produces water treatment chemicals and industrial cleaning agents, and the Portland Branch, which receives, stores, repackages, and distributes gaseous, liquid, and dry chemicals. Bulk chemicals typically stored by the Portland Branch in ASTs include acids, acetone, xylene, toluene, perchloroethene, trichloroethene, methylene chloride, methylethylketone, methyl isobutyl ketone, and

baseline values. Therefore, historical subsurface metal contamination on the subject property does not appear to be impacting adjacent river sediment at this time.

Groundwater Monitoring

There are 11 groundwater monitoring wells on the subject property. Monitoring results from February 1999 show 391-1280 micrograms per liter (ug/L) petroleum hydrocarbons as diesel or lube oil in nine monitoring wells, including the four downgradient locations adjacent to the Willamette River. This data indicates that petroleum hydrocarbon groundwater contamination migrating from the subject site may be contributing towards sediment contamination in the Willamette River. Migration of petroleum hydrocarbons on to the subject site from upgradient sources is possible, although the extent of off site contribution is not clear.

The 1999 data also shows that 1,1,1-trichloroethane (120 ug/L), trichloroethene (220 ug/L), and perchloroethene (2,600 ug/L) were detected in one monitoring well immediately downgradient of GWCC's chemical tank farm, and other volatile organic compounds (VOCs) were detected at trace levels in five additional monitoring wells. VOCs were not detected in the four downgradient monitoring locations adjacent to the Willamette River, suggesting that groundwater VOC contaminants are contained on the subject property.

Metals were not analyzed in the 1999 groundwater monitoring event.

McCall Construction Activity

A contractor stated that the US Coast Guard responded to a sheen on the Willamette River resulting from water-based construction activity at the McCall site in the late 1970's. The contractor was operating a boat used for dredging and installing riprap in the low-tide zone adjacent to the McCall site during installation of upland ASTs. Petroleum-contaminated sediment was encountered and created the sheen. It appears that this petroleum sediment contamination was from historical activities prior to construction and operation of the McCall Marine Terminal.

Regulatory History

Spills

McCall- There have been at least 20 spills of asphalt and diesel totaling more than 85,000 gallons from the McCall operations between 1947 and 1994. The majority of spills were on land and were contained, although the extent of cleanup is not clear. Asphaltic materials are viscous and generally do not migrate vertically in soil or dissolve readily in water.

The following spills into the Willamette River occurred during barge loadings at the dock: mid-1970's, unknown quantity of asphalt;

Air Quality Permits

McCall- The facility operates under a DEQ air quality permit for fuel burning equipment such as boilers.

Site Hydrogeology

The site lies in the northern-most Portland Basin, a major north-southeast trending sediment filled structural depression found in the northern part of the Willamette River valley and adjoining Columbia River valley (Swanson et al, 1993). The basin is filled with recent alluvium, Pleistocene cataclysmic flood deposits, Miocene to Holocene nonmarine sedimentary rocks, and is underlain by Eocene to Miocene volcanic and sedimentary rocks that are exposed along the basin margins.

The youngest deposits are recent alluvium (silt, sand and gravel mixtures) characteristic of an active fluvial environment. These are made up of shoreline, river channel, and adjacent floodplain deposits.

The subject site lies between U.S. Highway 30 (St.Helens Road) and the Willamette River, at the base of the Portland Hills. The facility was constructed on varying thicknesses of fill comprised of fine to medium sands and silts overlying alluvial floodplain deposits. Aquifers in the fill and floodplain deposits generally are unconfined and localized due to heterogeneity of the deposits. Occurring at various depths in the site vicinity, Columbia River Basalts (CRB) underlie these alluvial deposits. Deep wells installed in fractured CRB can be very productive and important supply wells. Site elevation is about 30 feet above mean sea level.

On site groundwater monitoring shows that the water table is about 11-18 feet below ground surface and groundwater flows north towards the Willamette River. _

Pathway Summary

The subject property lies in an area of mixed industrial and commercial use. There are no residences within 1/4 mile of the facility.

Site workers at the facility or trespassers could be exposed to contaminants in surface soil. Utility trench workers could potentially be exposed to subsurface contaminants through direct contact, inhalation, or incidental ingestion.

Oregon Water Resources Department has no well logs for domestic wells within one mile of the facility. The nearest significant

Conclusions/Recommendations

NOTE: As indicated previously, this review is limited to establishing a link between site activities and contamination in adjacent Portland Harbor sediments. It does not necessarily represent a thorough review of available site data, and the conclusions and recommendations presented below may reflect this limited focus.

The following conclusions are based on the contents of this review:

- It appears that site activities have resulted in sediment contamination adjacent to the site. Concentrations of dibenzofuran and PAHs in sample SD120A near McCall's dock and cadmium, lead, and zinc in sample SD114 near GWCC's storm water outfall exceeded Portland Harbor baseline values.

- The current and historical use of the site's docks for conveyance of petroleum products is a likely source of dibenzofuran and PAH contamination observed in the adjacent sediment sample (SD120A). There have been at least 20 spills of asphalt and diesel totaling more than 85,000 gallons from the McCall operations between 1947 and 1994.

- GWCC may be contributing towards cadmium, lead, and zinc sediment contamination near their stormwater outfall (sample SD114). These metals have been detected in GWCC's storm water analyses. Although phthalates were also detected in SD114 above baseline, phthalates do not appear to be used at this site.

- Metal and PAH concentrations observed in the upstream sediment samples are generally lower than in the sample adjacent to the McCall site. This provides additional information that the McCall site is a probable source for these contaminants observed adjacent to the site.

- Groundwater monitoring data shows on-site diesel or lube oil contamination may be migrating to the river, although it is not clear if subsurface migration is contributing towards documented river sediment contamination. The extent of groundwater petroleum hydrocarbon migration on to the site from upgradient sources is not clear. Although elevated levels of metals and chlorinated solvents has been detected in on-site groundwater in the past, these contaminants do not appear to be migrating to the river at this time.

Contamination of river sediments adjacent to the McCall site may represent a threat to human health and aquatic life within the river. The specific nature and significance of these threats cannot

TABLE 1

River Sediment Contaminant Concentrations (1997)

McCall Oil/Great Western Chemical

Contaminant	Sample Location / Units	SD114	SD115	SD117	SD117A	SD118	SD120 (Dock)	SD120A (Dock)	SD123 (Dock)	Upstream SD131	Apparent Portland Harbor Sediment Baseline Maximum Value
Aluminum	ppm	15800	43800	28600	37900	28400	42200	43700	37400	36600	42800
Antimony	ppm	<3	<5	<4	<4	<4	<6	<5	<5	5	<5
Arsenic	ppm	<3	<5	<4	<4	<4	<6	<5	<5	<5	<5
Barium	ppm	113	187	153	185	144	177	203	168	170	195
Beryllium	ppm	0.3	0.7	0.5	0.5	0.4	0.7	0.8	0.6	0.6	0.7
Cadmium	ppm	0.7	0.4	0.4	0.5	0.3	0.5	0.6	0.4	0.5	0.6
Chromium	ppm	24	39	28	35	28	38	41	34	35	41
Cobalt	ppm	13	20	16	18	17	18	20	18	17	19.7
Copper	ppm	29	45	30	43	28	42	54	42	40	60
Iron	ppm	31700	43600	35200	39900	35400	42300	44200	38700	38700	45000
Lead	ppm	47	14	20	22	12	17	23	14	20	30
Manganese	ppm	393	770	467	558	482	677	788	631	542	810
Mercury	ppm	0.02	0.06	0.11	0.17	0.06	0.06	0.08	0.06	0.06	0.1
Nickel	ppm	27	31	24	28	27	28	32	28	28	32
Selenium	ppm	9	11	11	7	8	10	13	9	10	15
Silver	ppm	0.4	0.8	0.9	1	0.6	0.8	1.1	0.6	0.7	1.4
Thallium	ppm	7	10	9	<4	8	6	6	6	9	13
Titanium	ppm	NA	NA	1900	2020	NA	NA	NA	NA	NA	2075
Vanadium	ppm	74	110	92	105	91	105	107	94	94	112
Zinc	ppm	212	101	101	157	89	104	142	97	126	118
2-Methylnaphthalene	ppb	<20	<20	<20	56	<20	<20	110	<19	<20	150
4-Methylphenol	ppb	<20	630	360	370	88	880	45	270	360	680
Benzoic Acid	ppb	<200	<200	<200	<190	<200	<200	<200	<190	<200	<200
Benzyl Alcohol	ppb	<20	<20	<20	<19	<20	<20	<20	<19	<20	<20
Bis(2-Ethylhexyl)phthalate	ppb	250	120	180	<90	59	150	300	91	210	390
Butylbenzylphthalate	ppb	120	<20	<20	<19	<20	<20	<20	<19	<20	<20
Carbazole	ppb	21	<20	<20	<19	<20	<20	<20	<19	<20	100
Di-N-Butylphthalate	ppb	<20	<20	<20	<19	<20	<20	<20	<19	<20	<20
Di-N-Octylphthalate	ppb	110	<20	<20	<19	<20	<20	<20	<19	<20	<20
Dibenzofuran	ppb	<20	<20	<20	<19	<20	<20	200	<19	<20	100
Dimethylphthalate	ppb	<20	<20	<20	<19	<20	<20	<20	<19	<20	<20
Pentachlorophenol	ppb	NA	<98	<99	<95	<99	<99	<98	<96	<100	Detect
Phenol	ppb	<20	<20	<20	19	<20	<20	<20	<19	<20	<20
LPAHs (total)	ppb	287	37	194	521	445	25	2237	33	59	700
HPAHs (total)	ppb	1740	312	776	998	1865	235	3038	222	406	2400
DDTs (total)	ppb	NA	NA	12	47	NA	NA	NA	NA	NA	220
PCBs (total)	ppb	NA	NA	26	72	NA	NA	NA	NA	NA	<180
Organotins (total)	ppb	NA	NA	<29	<28	NA	NA	NA	NA	NA	300
2,4-D	ppb	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3.3
2,4-DB	ppb	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5
TOC	%	0.7	1.5	0.8	1.3	1.5	1.8	1.8	1.5	1.1	2
Water Depth	ft	18	32	30	30	25	34	48	17	10	
Sediment Sample Depth	cm	0-7	0-17	0-6	0-90	0-7	0-17	0-85	0-13	0-13	

Notes:

100 = Value exceeds Portland Harbor Baseline Value

100 = Value is Greater than 2X Portland Harbor Baseline Value

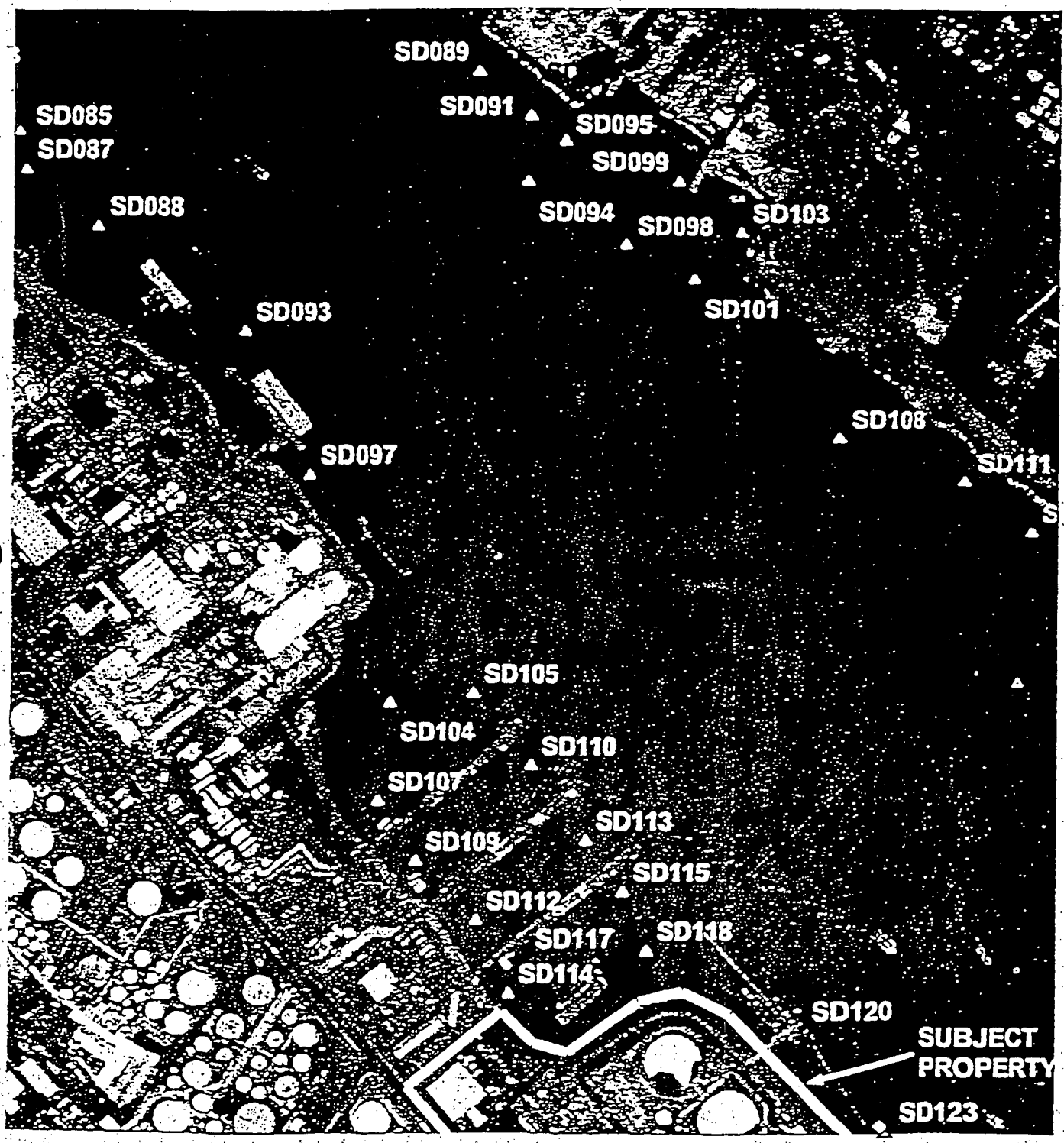
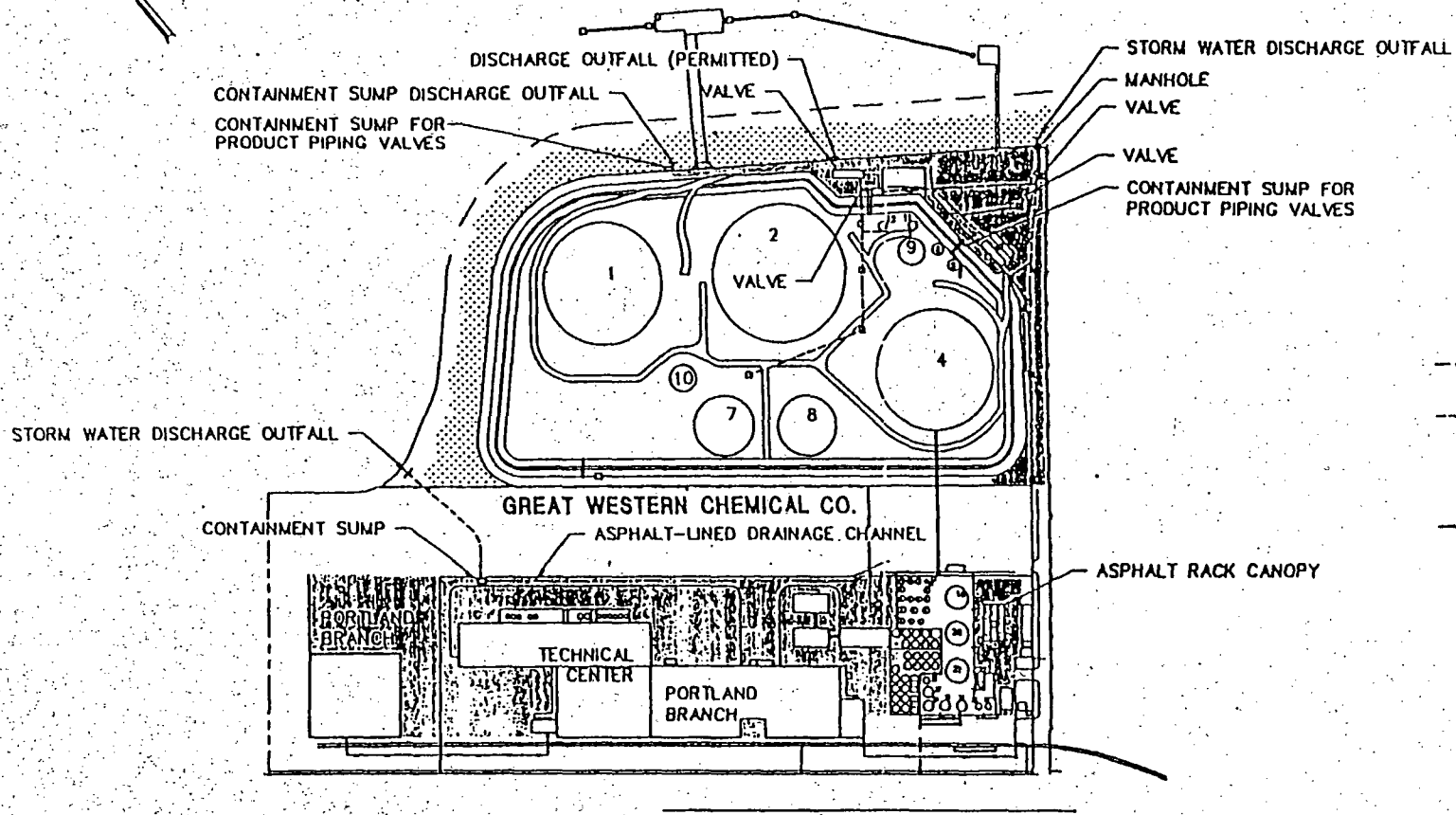


Figure 2
Sediment Sampling Locations

McCALL OIL COMPANY



0 200 400
SCALE IN FEET

EMCON Northwest, Inc.

MAP MODIFIED FROM McCALL OIL, EVACUATION PLAN, PORTLAND MARINE TERMINAL, "C-1", 8-26-93, PROJECT 1923 (1923.01\C01B.DWG)

DATE	3/94
DWN.	JTB
APPR.	
REVS.	
PROJECT NO.	0234003.01

Figure 4
McCALL OIL AND CHEMICAL CORPORATION
PRELIMINARY ASSESSMENT
PORTLAND, OREGON
IMPERVIOUS AREAS AND STORM WATER ROUTING

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